

5   **What is claimed is:**

1. An expression vector comprising: (a) a gene which codes for a protein/product of interest, functionally linked to a hamster-ubiquitin/S27a-promoter; and (b) a gene which codes for a fluorescent protein.

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2. The expression vector according to claim 1, comprising an amplifiable selectable marker gene.

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3. The expression vector according to claim 1, comprising one or more enhancers functionally linked to the promoter.

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4. The expression vector according to claim 1, further comprising an internal ribosomal entry site (IRES) which allows bicistronic expression of the gene which codes for the fluorescent protein, and of the gene which codes for the protein/product of interest.

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5. The expression vector according to claim 2, wherein the gene which codes for the fluorescent protein and the amplifiable selectable marker gene are located in one or in two separate transcription units.

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6. The expression vector according to claim 1, wherein the functional linking does not take place via intron sequences.

7. The expression vector according to claim 1, wherein the amplifiable selectable marker gene codes for dihydrofolate-reductase (DHFR) or a fusion protein of the fluorescent protein and DHFR.

8. The expression vector according to claim 3, wherein the enhancer is a CMV or SV40 enhancer.

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- 5     9. The expression vector according to claim 1, further comprising at least one  
polyadenylation signal.
- 10    10. An expression vector according comprising a multiple cloning site for the  
incorporation of a gene which codes for a protein/product of interest.
- 10    11. A eukaryotic host cell transfected with an expression vector according to claim  
2.
- 15    12. A host cell according to claim 11, which is a mammalian cell.
- 15    13. A host cell according to claim 11, which is a CHO cell.
- 20    14. The host cell according to claim 11, additionally transfected with one or more  
vectors comprising one or more genes encoding one or more other  
proteins/products of interest and at least one other selectable marker.
- 25    15. A process for preparing a heterologous gene product, comprising cultivating a  
host cell according to claim 11 under conditions which allow expression of the  
gene product, and isolating the gene product from the culture or culture  
medium.
- 30    16. A process for preparing a heteromeric protein/product, comprising co-  
transfected the host cell according to claim 14 with expression vectors which  
code for different subunits of the heteromeric protein/product under conditions  
which allow expression of the heteromeric protein/product, and isolating the  
heteromeric protein/product from the culture or culture medium.
- 35    17. The process according to claim 16, wherein the heteromeric protein is an  
antibody.

- 5     18. The process according to claim 15, further comprising subjecting the host cell  
      to one or more gene amplification steps in the presence of an amplifying agent.
- 10     19. The process according to claim 18, wherein the amplifiable selectable marker  
      is dihydrofolate reductase (DHFR) and the amplifying agent is methotrexate.
- 15     20. The process according to claim 18, wherein the host cell is subjected to only  
      one gene amplification step with methotrexate.
21. The process according to claim 15, wherein the host cell is cultured in a serum-  
15       free culture medium.
22. The process according to claim 15, wherein the host cell is cultivated in  
      suspension culture.
- 20     23. The process for selecting a host cell which expresses a protein/product of  
      interest comprising:  
            (i)    cultivating a population of host cells according to claim 11 under  
                  conditions which allow expression of the protein/product of  
                  interest and of the fluorescent protein; and  
25           (ii)    identifying and/or selecting the cells which show the highest  
                  expression levels of fluorescent protein.
24. The process according to claim 23, wherein selecting the cells comprises using  
      a Fluorescence-Activated Cell Sorter (FACS).
- 30     25. The process according to claim 23, further comprising subjecting the selected  
      host cells to one or more additional gene amplification steps in the presence of  
      an amplifying agent.

- 5     26. The process according to claim 25, wherein the amplifiable selectable marker  
is dihydrofolate reductase (DHFR) and the amplifying agent is methotrexate.